

ABSTRACT OF THE DISCLOSURE

[0080] The invention describes an automated method for correcting interferences with blood chemistry results on plasma or serum using automated hematology analysis of a whole blood sample. Such interference error results from the presence of exogenous oxygen-carrying blood substitutes in transfused blood samples. The automated method is performed using automated hematology analysis to correct errors due to interference in the determination of blood chemistries to provide accurate quantification of these parameters directly, rapidly and automatically. The automated interference correction method is advantageous for medical and clinical use following transfusion of patients with blood substitutes after trauma or during surgery, and for repeated or periodic monitoring of patients' blood samples during recovery. The inventive method can also be used to correct for any *in vivo* hemolysis, or in-collection-tube hemolysis if both the chemistry results and the cell by cell measurements are performed on blood from the same collection tube.